CHAPTER 2

SHIFTING NORMS IN WAGE DETERMINATION

In 1980, I noted three characteristics of the U.S. union labor market: a tendency for union wage increases to outpace nonunion, an insensitivity of wage decisions to real demand conditions, and a gradual erosion of the membership base.[1] In 1982, as dramatic developments in the determination of union wages began to unfold, I reported on a series of wage concessions that had been negotiated in industries as diverse as automobile manufacturing, intercity trucking, and meatpacking.[2] Despite the widespread concessions, however, it was impossible at that time to detect any substantial change in the union labor market as described above.

With an additional three years of observation permitting firmer conclusions, I explore here an apparent union wage norm shift and its implications for wage determination generally over the next few years. Four basic points are made. First, union wage indexes have recently been rising at surprisingly slow rates, given economic circumstances. Second, various institutional developments in the union sector reinforce the evidence of a wage norm shift. Third, the form of union wage concessions made in the past few years suggests that future union wage growth will be moderate and somewhat less responsive to price inflation than it was in the past. Fourth, the union sector is large enough to affect aggregate wage indexes, even if no norm shift has occurred in the nonunion sector.

UNION WAGE CONCESSIONS

The phenomenon of union wage concessions is not new. What is new in the 1980s is their volume. As Table 1 indicates, since 1982 substantial fractions of workers under newly negotiated "major" private union contracts have had their first-year wages frozen or cut. Because some

This essay originally appeared in *Brookings Papers on Economic Activity* 2 (1985): 575–599.
© 1985 by The Brookings Institution. Used by permission of the publisher.

workers may have received
possible to estimate preci
encing at least one concess
between one-third and one

Table 1. Proportion of Workers
and with Substantial Real Wage

Year	CPI-W inflation rate (1)
1959	1.5
1960	1.5
1961	0.7
1962	1.2
1963	1.6
1964	1.2
1965	1.9
1966	3.4
1967	3.0
1968	4.7
1969	6.1
1970	5.5
1971	3.4
1972	3.4
1973	8.8
1974	12.2
1975	7.0
1976	4.8
1977	6.8
1978	9.0
1979	13.4
1980	12.5
1981	8.7
1982	3.9
1983	3.3
1984	3.5
1985[b]	4.2

Source: *Current Wage Developme*
a. Concessions are first-year wa
interpolation. Figures are round
December-to-December basis, e
b. First six months.
c. Preliminary.

N WAGE
ON

S union labor market: a
onunion, an insensitivity
and a gradual erosion of
velopments in the deter-
orted on a series of wage
ies as diverse as automo-
earpacking.[2] Despite the
ible at that time to detect
t as described above.
ation permitting firmer
wage norm shift and its
r the next few years. Four
have recently been rising
istances. Second, various
inforce the evidence of a
concessions made in the
growth will be moderate
than it was in the past.
aggregate wage indexes,
on sector.

IONS

not new. What is new
es, since 1982 substan-
d "major" private union
n or cut. Because some

c Activity 2 (1985): 575–599.
the publisher.

workers may have received more than one wage freeze or cut, it is not possible to estimate precisely the proportion of such workers experiencing at least one concession. However, the fraction can be estimated at between one-third and one-half under alternative assumptions.[3]

Table 1. Proportion of Workers under Major Private Union Settlements with Concessions and with Substantial Real Wage Declines, 1959–85[a] (Percent)

		Proportion of workers with freezes and cuts		
Year	*CPI-W inflation rate (1)*	*Freezes and cuts (2)*	*Cuts (3)*	*Proportion of workers with settlements 3.3 percentage points below CPI-W inflation (4)*
1959	1.5	3	0	0
1960	1.5	4	0	0
1961	0.7	7	0	0
1962	1.2	22	0	0
1963	1.6	25	0	0
1964	1.2	5	0	0
1965	1.9	4	0	0
1966	3.4	1	0	1
1967	3.0	1	0	0
1968	4.7	0	0	0
1969	6.1	1	0	1
1970	5.5	0	0	0
1971	3.4	1	0	1
1972	3.4	3	0	3
1973	8.8	1	0	41
1974	12.2	1	0	39
1975	7.0	4	0	9
1976	4.8	4	0	6
1977	6.8	2	0	9
1978	9.0	2	0	31
1979	13.4	4	0	52
1980	12.5	0	0	50
1981	8.7	8	5	13
1982	3.9	44	2	45
1983	3.3	37	13	37
1984	3.5	23	5	25
1985[b]	4.2	26	4	28[c]

Source: *Current Wage Developments*, various issues.

a. Concessions are first-year wage freezes or cuts. Estimates in column 4 are based on interpolation. Figures are rounded to the nearest whole number. CPI-W inflation is on a December-to-December basis, except 1985, which is on a December-to-June basis.

b. First six months.

c. Preliminary.

Could Table 1 simply reflect the recent disinflation? Since price inflation variables inevitably show strong explanatory power in wage-change studies, perhaps real wage freezes and cuts are to be expected in periods of low inflation, as the mean of the wage-change distribution drifts downward. In fact, the available evidence does not bear out such an interpretation.

The year of lowest inflation in the early 1980s as measured by the CPI-W, the consumer price index for urban wage earners and clerical workers, was 1983. A worker experiencing a wage freeze in that year would have suffered a real wage loss of 3.3 percent as measured by CPI-W. Column 4 of Table 1 shows, for each year from 1959 to 1985, the proportion of workers with contracts providing first-year basic wage adjustments of 3.3 percentage points below CPI-W inflation.

In the early 1960s, when measured inflation was less than 2 percent, virtually no workers received wage settlements 3.3 percentage points below CPI-W. In two years, 1962 and 1963, significant proportions of workers under newly negotiated contracts received wage freezes, but the low inflation rate ensured that their real wage loss was well under 3.3 percent. Nor do productivity growth differences appear to be explanations for the differential wage performance in the two periods; the growth rate of nonfarm productivity in 1962–63 was about the same as in 1983–84.

The only periods before the 1980s in which substantial proportions of workers suffered such real wage losses were those of accelerating inflation, such as 1973–74 and 1978–80. Thus, it appears that until the early 1980s, wage slippage could largely be attributed to unanticipated inflation and a lag in wage responsiveness to price developments. But after 1980, that type of lag should have produced unanticipated real wage gains, not the erosion that actually occurred.

The early 1980s were characterized not only by disinflation but by high unemployment as well. Perhaps unemployment, a measure of labor demand conditions, accounts for the wage losses of the 1980s. But, again, the evidence does not suggest that the early 1980s was a period of "normal" wage determination. Table 2 shows the actual and predicted performance of six wage indexes (three union-oriented, two aggregate, one nonunion-oriented) during 1980–84, with predictions based on wage

equations estimate
current unemploym
the union sector us
than the official rat
industries as compa
unemployment rate
problem involving n
ficially in the late 1
residuals), an altern

Table 2. Actual and Pre

	Wage m
Median first-year union	
Actual	
Predicted	
Median first-year union	
Actual	
Predicted	
Median effective union w	
Actual	
Predicted	
Change in hourly earnin	
Actual	
Predicted	
Change in compensation	
Actual	
Predicted	
Change in selected nonu	
Actual	
Predicted	

Sources: *Current Wage D*
note 4.
a. Union wage indexes re
The hourly earnings inde
nonfarm sector and is ac
interindustry employmen
nonfarm, business sector
nonunion earnings are th
for the following industr
(furniture stores), and SI
nonsupervisory employm

nflation? Since price inflation
ower in wage-change studies,
expected in periods of low
ribution drifts downward. In
such an interpretation.
1980s as measured by the
n wage earners and clerical
a wage freeze in that year
3 percent as measured by
ch year from 1959 to 1985,
viding first-year basic wage
CPI-W inflation.
on was less than 2 percent,
3.3 percentage points below
ar t proportions of workers
ge freezes, but the low infla-
well under 3.3 percent. Nor
e explanations for the differ-
he growth rate of nonfarm
is in 1983–84.
ch substantial proportions
those of accelerating infla-
appears that until the early
ted to unanticipated infla-
e developments. But after
d unanticipated real wage

nly by disinflation but by
yment, a measure of labor
losses of the 1980s. But,
early 1980s was a period
's the actual and predicted
n-oriented, two aggregate,
predictions based on wage

equations estimated over 1959–79. The equations contain a term for current unemployment and lagged price inflation; equations applying to the union sector use a union-oriented measure of unemployment rather than the official rate. Thus differences in economic conditions in union industries as compared with others are reflected in the union-oriented unemployment rate. Also, since the CPI suffered from a methodological problem involving mortgage interest rates (which boosted the index artificially in the late 1970s and early 1980s and tended to produce large residuals), an alternative price index has been used in the equations.[4]

Table 2. Actual and Predicted Wage Changes, 1980–84[a] (Percent)

Wage measure	*1980*	*1981*	*1982*	*1983*	*1984*
Median first-year union wage adjustments					
Actual	9.4	11.0	3.7	3.7	2.2
Predicted	10.7	11.8	9.8	7.1	5.4
Median first-year union wage increases					
Actual	9.4	11.0	7.1	5.8	2.9
Predicted	10.8	11.9	10.0	7.3	5.6
Median effective union wage adjustments					
Actual	10.7	10.5	6.7	4.7	3.7
Predicted	10.2	11.3	9.7	7.1	5.2
Change in hourly earnings index					
Actual	9.0	9.1	6.8	4.6	3.3
Predicted	9.4	10.3	8.6	6.3	4.7
Change in compensation per hour					
Actual	10.3	9.6	8.0	4.9	4.1
Predicted	10.1	11.1	9.3	6.8	5.3
Change in selected nonunion hourly earnings					
Actual	7.9	8.4	5.7	5.2	4.3
Predicted	7.6	8.3	6.8	5.0	4.1

Sources: *Current Wage Developments* and author's regression as specified in equation 1. See note 4.

a. Union wage indexes refer to major private settlements involving 1,000 or more workers. The hourly earnings index applies to production and nonsupervisory workers in the private, nonfarm sector and is adjusted to exclude the effects of overtime in manufacturing and interindustry employment shifts. Compensation per hour applies to all employees in the nonfarm, business sector and includes private and legally required fringe benefits. Selected nonunion earnings are the weighted average percentage changes in average hourly earnings for the following industries: SIC 533 (variety stores), SIC 56 (apparel stores), SIC 57 (furniture stores), and SIC 60 (banking). Weights used are the levels of production and nonsupervisory employment in 1979.

The three union and two aggregate wage index equations all produce overpredictions, particularly starting in 1982, suggesting that actual wage settlements and decisions have been lower than would have been expected, given economic conditions. This finding applies even when settlements involving wage freezes and cuts are removed from the index of first-year union wage agreements. That is, even those union settlements that did not involve wage freezes and cuts produced surprisingly low wage adjustments.

There is a difference, however, in the performance of the union-oriented indexes and the others with regard to the more recent residuals. The compensation-per-hour index, which includes many nonunion workers such as managers and supervisors, shows only a small residual by 1984. The hourly-earnings index, which exhibits a larger residual in that year, has a much larger union weight because it excludes supervisory personnel. Thus, there is a strong possibility that the 1984 residuals in the aggregate indexes heavily reflect union sector developments.

Table 2 includes, as a test of this possibility, a nonunion hourly-earnings index for selected industries with low unionization. The low unionization rates ensure not only that there are few union workers covered by the index but also that spillover and "threat" effects from the union sector are minimal. In sharp contrast to the other indexes, this nonunion index is not overpredicted. The suggestion is that the recent slowing of wage growth has been concentrated in the union sector. As will be discussed below, there are good reasons to expect the norm shift phenomenon to be confined to the union sector.

There are also reasons to expect that the current lull in union wage setting will continue in the future. Table 3 shows the first-, second-, and third-year adjustments by year of negotiation as reported from a survey of union settlements by the private Bureau of National Affairs, Inc. (BNA). Settlements involving fifty or more workers are summarized on a biweekly basis in the BNA *Daily Labor Report*. In the early 1980s, contracts tended to be "front loaded," that is, higher adjustments were scheduled in the earlier years of contracts, probably reflecting declining expectations of inflation and also an expectation of more escalator

payments, or cost-of-living adjustments, in later years. (Escalator adjustments are excluded from the table.)

Table 3. Scheduled Wage Adjustments in First, Second, and Third Years of Union Contracts, 1980–84 Settlements (Percent)

	Year in which wage adjustment is effective							
Year of settlement	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*	*1987*
1980	9.5	8.8	6.7	—	—	—	—	—
1981	—	9.6	8.0	7.5	—	—	—	—
1982	—	—	7.0	7.0	6.1	—	—	—
1983	—	—	—	4.5	4.8	4.5	—	—
1984	—	—	—	—	4.0	4.0	4.0	—
1985[a]	—	—	—	—	—	4.0	4.0	4.0

Source: Bureau of National Affairs, Inc., *Daily Labor Report*, July 22, 1985, p. B-2; January 22, 1985, p. B-2; January 23, 1984, p. B-5; January 21, 1983, p. B-1; January 22, 1982, p. B-1; January 23, 1981, p. B-2.
a. First six months.

During the most recent period shown, contract terms have flattened out to an even 4 percent per year. And, as will be demonstrated below, the flatness is unlikely to reflect expectations of large escalator increases later in the contract since escalator clauses have been limited in union concession agreements. Bargainers appear to expect a continuation of current moderate wage trends.

CONCESSION-PRONE SECTORS

U.S. Bureau of Labor Statistics (BLS) data on union wage settlements, such as those used in Table 1, cover only major agreements involving 1,000 or more workers. A more comprehensive survey is undertaken by the BNA, which, as just noted, reports settlements involving fifty or more workers. From that survey, I culled agreements involving first-year wage freezes or cuts for analysis. Such agreements began to appear in appreciable numbers in late 1981, when they accounted for 3 percent of all settlements reported. The proportion rose to 12, 28, 27, and 22 percent in 1982,1983, 1984, and the first half of 1985, respectively.

Data from the BNA survey reveal that concessions were not evenly spread across industries. In Table 4, which shows the industry

breakdown of wage freezes and cuts from January 1981 to June 1985, the heavy representation of construction is apparent. Thirty-nine percent of all concessions reported were in construction, many in settlements involving relatively small numbers of workers in particular crafts and cities. A better measure of the concession-proneness of various industries would be the proportion of all settlements in the industry involving concessions. Unfortunately this alternative measure could not be constructed from the data at hand, though some crude calculations suggest that it would yield a picture qualitatively similar to that emerging from Table 4.[5]

Table 4. Union Settlements Involving Concessions, January 1981–June 1985[a] (Percent)

Industry	*Industry share of all wage freezes and cuts*	*Wage cuts as percentage of all freezes and cuts*
Construction	39	28
Retail food stores[b]	10	34
Metal manufacturing	9	22
Machinery	6	11
Lumber and paper	4	2
Airlines	4	40
Meatpacking	3	60
Printing and publishing	3	6
Motor vehicles[c]	3	9
Aerospace	2	4
All other	17	12
Total	100	23

Source: Biweekly survey by the Bureau of National Affairs, Inc. It covers union settlements involving fifty or more workers.

a. Table is based on 1,115 contracts. Concessions are first-year wage freezes or cuts.

b. Includes related wholesale operations.

c. Includes motor vehicle parts.

A common interpretation of the concession movement is that it reflects deregulation in certain industries and increased foreign competition, associated with the appreciation of the dollar in the early 1980s, in others. Some industries in Table 4 easily fit those interpretations. The airline industry, for example, was clearly strongly affected by deregulation that permitted product market competition via price cutting and new

entry. And metals, machinery, lumber, and the commercial side of aerospace all suffered from international competition. But not all industries neatly fit the mold.

Construction, the concession leader, was not subject to foreign competition. Nor, it turns out, was deregulation a decisive influence. Certain restrictions on nonunion bidding for federally financed construction projects were weakened through administrative changes in the Davis-Bacon Act in 1982, but because of delays due to litigation, the concession movement in construction was already well established before the most significant Davis-Bacon changes were implemented.[6]

The situation is the same in retail food stores and in printing and publishing. In neither is foreign competition or deregulation an issue. The only product market conditions that could have influenced wage settlements in construction, supermarkets, and printing are the general economic slump of the early 1980s and lower-wage, nonunion competition.

The participation of particular unions in concessions (not reported in the table) is largely a reflection of their representation in concession-prone industries rather than of any inherent propensity to concede. The United Food and Commercial Workers International Union, for example, had the misfortune of representing workers concentrated in retail food stores and meatpacking, both centers of concession bargaining. It accounted for 11 percent of the wage freezes and cuts in the BNA sample, more than any other union. Some unions, such as the Laborers, Plumbers, Operating Engineers, and Plasterers, accounted for significant numbers of concessions solely because of their linkage with the construction industry. Several unions represented workers in construction as well as in other high-concession industries. The Teamsters represent truck drivers in construction and in retail food stores. The Carpenters are in both construction and lumber. The latter two unions each accounted for 7 percent of the freezes and cuts in the BNA sample.

SHIFTING WAGE NORMS

The concept of a shift in wage norms, developed by George L. Perry, suggests that wage-change expectations and targets can be viewed as shifting discretely between periods.[7] For example, Perry argues that wage norms dropped in the early 1960s in response to low price inflation, an extended period of relatively high unemployment, and the federal wage-price guideposts program. They then shifted upward in the 1970s in response to the acceleration of inflation in the 1960s and the price shocks of the mid-1970s.

The importance of the norm shift concept is that it suggests a certain lethargy in the responsiveness of wage expectations and targets. Thus, the period of wage calm that developed in the early 1980s can be expected to herald a period of continued calm, even in the face of moderate real economic expansion. In turn, such a calm would, because of its anti-inflationary effects, encourage the continuation of expansionary policies.

Table 5 provides data suggestive of a broad downward shift in wage norms. The table shows that wage freezes and cuts began in a narrow range of industries in 1981 and have been spreading progressively ever since. As the number of industries affected grew, the conventional explanations—deregulation, foreign competition, general economic distress—became harder to credit, and the alternative hypothesis of a demonstration effect became more difficult to reject.

Table 5. The Spread of Concessions, by Industry, January 1981–June 1985[a]

Industry	*1981*	*1982*	*1983*	*January 1984–June 1985*
Metals	X	X	X	X
Motor vehicles[b]	X	X	X	X
Retail food stores[c]	X	X	X	X
Machinery	X	X	X	X
Meatpacking	X	X	X	X
Airlines	X	X	X	X
Printing and publishing	X	X	X	X
Health care	X	X	X	X
Lumber and paper	X	X	X	X
Ordnance	X	—	—	X

y George L. Perry,
s can be viewed as
ry argues that wage
low price inflation,
nt, and the federal
pward in the 1970s
960s and the price

t suggests a certain
d targets. Thus, the
0s can be expected
e of moderate real
ecause of its anti-
ansionary policies.
ward shift in wage
began in a narrow
ling progressively
, the conventional
general economic
ve hypothesis of a

ne 1985[a]

	January 1984–June 1985
	X
	X
	X
	X
	X
	X
	X
	X
	X

Industry	*1981*	*1982*	*1983*	*January 1984–June 1985*
Construction	—	X	X	X
Transit and bus lines	—	X	X	X
Rubber	—	X	—	X
Trucking	—	X	X	X
Aerospace	—	X	X	X
Textiles	—	X	X	X
Food manufacturing except meatpacking	—	X	X	X
Instruments	—	X	X	X
Chemicals	—	X	X	X
Furniture	—	X	X	X
Hotels and restaurants	—	X	X	X
Shipping	—	X	X	X
Other transportation equipment[d]	—	X	X	X
Brick, clay, stone	—	X	X	X
Finance, insurance	—	X	—	X
Communications	—	X	—	X
Apparel	—	X	—	X
Business services	—	—	X	X
Railroads	—	—	X	—
Unions[e]	—	—	X	X
Cement	—	—	X	X
Entertainment	—	—	X	X
Mining	—	—	X	X
Warehousing	—	—	X	X
Glass	—	—	X	—
Education	—	—	X	X
Retail except food stores	—	—	—	X
Leather	—	—	—	X
Petroleum	—	—	—	X
Tobacco	—	—	—	X
Utilities	—	—	—	X

Source: Same as Table 4.

a. An "X" indicates the presence of at least one contract involving a concession in the industry and period indicated. Concessions are first-year wage freezes and cuts.

b. Includes motor vehicle parts.

c. Includes related wholesale operations.

d. Transportation equipment excluding motor vehicles and parts and aerospace.

e. Unions in their role as employers of their own staffs.

Explanations of the distress in the automobile industry in 1982, for example, do not carry over easily to concessions at Las Vegas hotels and at Disneyland in 1984. The fact is that management today, in virtually any type of industry, is much more likely to raise product market issues as part of its bargaining tactics than it would have in the 1970s. In a 1985 dispute involving an attempt by San Francisco gravediggers to recoup from a previous one-year wage freeze, management raised the specter of competitive inroads by nonunion cemeteries.[8] When, as was the case in many of the initial concession settlements, imminent bankruptcy and mass layoffs were threatened, the resulting wage freezes and cuts were easy to rationalize. But the longevity of the concession movement and its spread to less-than-dire situations suggest that the initial concessions have encouraged other employers to try their luck in demanding similar settlements.

Additional evidence of a shift in the wage-setting climate is to be found in the union environment itself. Declines in union membership, reduced strike activity, changes in the political and legal balance between unions and management, shifts in management bargaining strategies, and the history of the union-nonunion wage differential all confirm a change.

Declining Union Representation in the Work Force

At the same time that wages were behaving in an atypical fashion, union membership began to fall rapidly in the private sector. In May 1980, according to the *Current Population Survey*, unions represented 15.5 million wage and salary workers in the private sector, a representation rate of 21.7 percent. By 1984, the number represented had declined to some 13 million, and the representation rate, to 17 percent. This national trend was confirmed at the local level by BLS area wage surveys of production worker unionization in medium-to-large establishments. Rates of unionization fell in three-fourths of the metropolitan areas surveyed from 1977–79 to 1980–82.[9]

The economic slump of the early 1980s particularly affected certain heavily unionized sectors of the work force, such as construction and

manufacturing. But industrial composition cannot account for the aggregate representation losses in the union sector. According to data from the BLS on workers covered by major contracts, industrial mix changes can explain only about one-quarter of those losses.[10]

Unions simply lost more in the 1980s, in terms of both membership and wage settlements, than can be explained by economic circumstances and historical relationships. To the extent that unions lose membership only because of interindustry employment shifts, they need not lose bargaining power, though they might lose some political clout. But losses within industries do suggest weakened bargaining positions due to greater competition with nonunion firms in the product market.

Decreased Strike Activity

Strike incidence has always posed an analytical puzzle to economists. In theory, strikes are random "mistakes" made by the parties about each other's true bargaining position. But in fact, strikes seem to reflect shifts in union militancy. Periods of upward adjustment in the wage norm, such as the late 1960s, have been accompanied by heavy strike activity. In contrast, in the early 1960s, when the wage norm was low, strike activity was quiescent.

Table 6 suggests a resemblance between the early 1980s and the early 1960s in this regard. Whether measured by BLS indexes of reported strikes involving 1,000 or more workers or by *Current Population Survey* reports of individuals with a job but absent from work because of a labor dispute, the level of strike activity accompanying the low wage settlements in the early 1980s fell sharply. Regression analysis also indicates an abnormally low incidence of strikes during the concession period.[11]

Table 6. Work Stoppages, 1960–84

Period	*Average annual number of stoppages beginning in period indicated*[a]	*Average annual number of workers involved in stoppages beginning in period indicated*[a]	*Average monthly number of employees not at work because of labor disputes*[b]
1960–64	211.0	883,000	44,200
1965–69	354.8	1,584,400	88,200
1970–74	334.0	1,831,000	120,600
1975–79	243.6	1,144,600	110,800
1980–84	114.2	693,000	67,200

Sources: U.S. Bureau of Labor Statistics, "Major Work Stoppages: 1984," *News*, press release USDL: 85-85, February 27, 1985; U.S. Bureau of Labor Statistics, *Handbook of Labor Statistics*, bulletin 2175 (GPO, 1983), 61; *Employment and Earnings*, various issues.
a. Situations involving 1,000 or more workers.
b. Figures in this column are simple means of the annual averages.

There were some bitter disputes in the 1980s. However, in a number of prominent conflicts, such as Continental Airlines Corporation, Phelps Dodge Corporation, and Louisiana-Pacific Corporation, employers succeeded in operating with nonunion personnel, perhaps discouraging other workers from striking in an era of job insecurity. As long as this atmosphere of insecurity persists, as it is likely to do unless unemployment rates fall markedly in the union sector, lower wage-change norms can be expected to continue.

The Political-Legal Setting

Since the advent of the Reagan administration, unions have not found encouragement in the processes of labor market regulation. While there have been no changes in basic labor legislation, administrative appointments and changes at agencies such as the National Labor Relations Board (NLRB) are perceived by unions as hostile to their interests. Although legal scholars can debate the wisdom of this or that NLRB or court decision, there is little doubt that the changes in the regulatory climate have complicated union efforts to win substantial pay advances, preserve jobs, and engage in new organizing.[12] Regulatory changes that hamper job preservation and organizing, in particular, open the door to more nonunion competition and resultant management resistance to union wage demands.

...ber ...d in ...gin ...t	Average monthly number of employees not at work because of labor disputes[b]
	44,200
	88,200
	120,600
	110,800
	67,200

...pages: 1984," *News*, press release ... Statistics, *Handbook of Labor E...rnings*, various issues.

...erages.

...s. However, in a number ...ies Corporation, Phelps ...Corporation, employers ...el, perhaps discouraging ...security. As long as this ...to do unless unemploy- ...wer wage-change norms

..., unions have not found ... regulation. While there ... administrative appoint- ...ational Labor Relations ...ostile to their interests. ... of this or that NLRB ...hanges in the regulatory ...ubstantial pay advances, ...Regulatory changes that ...icular, open the door to ...nagement resistance to

Even before the concession era, attitudes toward collective bargaining were changing. Industrial relations researchers are now finding evidence that in the late 1960s, a heightened determination to resist new unionization developed in the management community.[13] This change in management attitudes may well have been linked to the upward shift in wage-change norms, with its accompanying strikes, militancy, and rank-and-file rejections of tentative settlements reached by union leaders. In any case, experimentation by employers revealed that the legal system could accommodate increased management resistance to new unionization without substantial penalties.

The 1984 presidential campaign was seen by organized labor as crucial to its future. While the AFL-CIO attempted to put a bright face on the Mondale electoral debacle by noting that a majority of their members supported the Democratic ticket, the large membership losses noted above raise important questions about the future political clout of unions. In the aftermath of Mondale's defeat, the AFL-CIO even began to reconsider whether collective bargaining should remain the centerpiece of its activities.[14] There is no way of quantifying the impact of these developments on collective bargaining outcomes, but the overall effect will be to prolong the period of lowered wage expectations.

Management Bargaining Strategies

Management, cheered by what is perceived as a shift in the balance of power, has changed its bargaining goals. Managers in the 1980s are more concerned with the economic fortunes of their enterprises and less concerned with industry wage patterns than they were in the 1970s. They are also more willing to demand givebacks from unions and less willing to make accommodating trade-offs.[15]

The political and legal climate change has been reflected in a greater willingness by management to take actions in labor disputes that might not have been publicly or politically acceptable in the past. Operating with nonunion labor—or threatening to do so—seems more common than was once the case. Even firms with a long history of unionization are using nonunion labor.[16] During the early 1960s, there was discussion

of a management "hardening" that coincided with a downward wage norm shift; the same symptoms are evident today.

The Union-Nonunion Wage Differential

The widening of the union-nonunion wage differential in the 1970s is by now a familiar story. Unfortunately, the BLS did not start explicitly measuring union and nonunion wage trends until the mid-1970s. Thus, estimates of the level of the differential, or the degree to which it widened, will vary depending on data sources.

From 1975, when data for the index began to be collected, to 1982, the BLS Employment Cost Index for wages and salaries indicated a widening of the union-nonunion differential of about 8 percentage points. By early 1985, some 3 points had been subtracted from the 1982 peak. That the differential remains wider today than in the mid-1970s suggests, in concert with other labor market developments noted above, a continued moderate union wage norm.

Apart from its utility as a forecasting device, the union-nonunion wage differential provides insights into the institutional underpinning of the concept of a wage norm shift. For management facing unionized labor, the costs of experimentation in wage settlements are potentially high, because of the strike threat and the bargaining relationship. The union-nonunion wage differential may grow simply because management is reluctant to test its ability to stop it. Labor costs become too high in the long run because short-run calculations of costs and benefits by management suggest the wisdom of a passive response to union demands. Finally, however, a recession pushes managers in certain industries to experiment, and other managers, emboldened, follow the example. In fact, the downward wage norm shift in the 1960s was also preceded by a widening union-nonunion wage differential in the 1950s. History thus has repeated itself in the 1980s.

CATEGORIZING THE CONCESSIONS

Three years ago, I suggested that concessions, and their effects, could be categorized according to the coefficients of a stylized wage-change equation of the form:

$$(1) \quad w = a + bU^{-1} + cp,$$

where U^{-1} is the inverse of the unemployment rate (or some other demand-sensitive variable), p is some measure of lagged price inflation, w is the annual rate of wage change, and a, b, and c are regression coefficients.[17] The a coefficient can be viewed as a measure of wage pressure. Given a rate of price inflation and a real measure of labor demand, a large value of a would suggest higher wage increases; a lower value would suggest wage moderation. Similarly, the higher the value of b, the greater is wage sensitivity to real demand conditions; and the higher the value of c, the greater is wage sensitivity to price inflation. Concessions can be analyzed in terms of their effects on these three coefficients.

Changes in Wage Pressure

Perry's concept of changing wage "norms" can be discussed in terms of a shift in the a coefficient. In 1983, union wage concessions began to include two features that suggest a drop in wage pressure: first, the substitution of a fixed bonus for a guaranteed wage rate increase; and second, pay cuts for entry-level employees. Both changes can be viewed as mechanisms by which a downward shift in wage norms can be accommodated.

Fixed bonuses have been particularly prominent in concessions in three industries. Lumber and paper workers have 28 percent of all fixed bonus plans included in settlements from January 1983 through June 1985; aerospace workers have 16 percent; and retail food store workers, 19 percent. Fixed bonus plans were found in about 30 percent of the wage freeze and cut settlements reported during the first six months of 1985, up from 8 percent in 1984, before which they were negligible. The BNA also estimates that such plans were included in some 7 percent of all 1984 agreements, concession and nonconcession; among the latter were the well-publicized General Motors Corporation and Ford Motor Company agreements.

The use of fixed bonus plans has an important wage-change effect, especially in multiyear contracts. A three-year contract containing a 3 percent wage increase each year produces an annual wage 9 percent above the initial base in the third year. In contrast, a bonus plan involving 3 percent lump sum distributions does not raise the basic wage at all and produces a compensation level only 3 percent above the initial base in the third year. Indeed, since such plans often do not pay the bonus to workers employed less than a full year before the payment date, the compensation increase averaged over the entire work force may well be less than 3 percent.[18]

The second contractual feature that reduces labor cost increases is cuts in pay for entry-level employees. These arrangements, commonly called "two-tier wage plans" because of the dual payor benefit structure created, are more likely than across-the-board pay cuts to win the approval of existing employees in union ratification votes. The plans are of two basic types. Permanent plans create an entirely separate pay structure for new hires, who never catch up with existing workers. Temporary plans provide for a catch-up period, though in some cases the catch-up period is so long—sometimes as much as ten years—that the plan is quasi-permanent.[19]

Just under half of a sample of two-tier contracts collected by the BNA in mid-1984 were of the permanent variety.[20] A survey of Los Angeles area firms that I conducted with Sanford M. Jacoby found that of those firms reporting two-tier plans, just over half had temporary plans only, almost 30 percent had permanent plans only, and the others had both types.[21] Although there have been some instances in which unions negotiated the abolition of a two-tier plan, adoption of the plans is still increasing. The BNA reported that 8 percent of all nonconstruction settlements had some type of two-tier system in 1984, up from 5 percent in 1983.[22]

Within the concession sector, the two-tier movement began to appear in 1982; in 1984, 10 percent of concession contracts had provisions reducing entry wage rates; in the first six months of 1985, 12 percent of concession contracts had such provisions. Two-tier arrangements

were particularly concentrated in the supermarket industry, which had 34 percent of all such plans included in settlements between January 1982 and June 1985. Aerospace and construction each had 11 percent. Two-tier plans also figured in several prominent airline settlements that were not concessions as defined here. In construction, where the casual nature of the employer-employee relationship does not lend itself to permanent plans, two-tier plans were mainly cuts in apprentice wages relative to those of journeymen. Those in aerospace may have resulted in part from Defense Department pressure on contractors to hold down labor costs, pressure strongly protested by the unions affected.

Two-tier plans have interesting implications for industrial relations, since, at least under the permanent systems, they involve employees working side by side under separate pay schedules. In cases where skill differentials were narrowed by escalators in the 1970s, two-tier plans may be a way of restoring a wide wage spread. However, the implication of two-tier plans for future pay adjustments is simple arithmetic. As long as the proportion of employment in the lower tier is expanding, actual pay adjustments will be lower than those reported for the upper tier.

Changes in Responsiveness to Demand

While the concession settlements can be viewed as responsive to demand conditions, this does not imply that a greater responsiveness to demand—a larger b coefficient—can be expected in the future. Examining other characteristics of recent bargains sheds some light on this question. One explanation for past insensitivity of union wages to short-run demand fluctuations has been the multiyear contract. Such contracts normally prevent wages from reacting to changes in demand after negotiations are concluded. They might also give rise to a multiyear wage-setting horizon that encourages bargainers to ignore economic conditions at the time of negotiations as "transitory."

In general, however, the concession contracts have maintained the multiyear framework, as can be seen in Table 7. Contract durations for the concession agreements are slightly below the all-settlement average, but tend to be in the two-and-one-half-year range. Contracts with

cost-of-living adjustment (COLA) clauses tend to be three-year agreements. Those with no COLA average a little over two years in length. Much of the shortening that has occurred is concentrated in construction, an industry that has shown a decided propensity to shift to one-year contracts during previous episodes of wage uncertainty.[23]

Table 7. Contract Duration in Settlements with Concessions and in All Settlements, January 1981–June 1985 (in Months)

Period	Concession contracts			
	With COLA	*Without COLA*	*All contracts*	*All settlements*[a]
1981	32	18	24	32
1982	34	26	30	29
1983	35	27	29	32
1984	34	27	29	31
1985[b]	34	31	32	32
January 1981–June 1985	34	28	29	31

Sources: Same as Table 4 and *Daily Labor Report*, section B, issues of January 22, 1982; January 21, 1983; January 23, 1984; January 22, 1985; July 22, 1985.
a. Calculated from information appearing in *Daily Labor Report* on one-year, two-year, and three-year contracts. It was assumed that these contracts had durations of 12, 24, and 36 months, respectively, and that other contracts had durations of 48 months. Results for 1981–85 are weighted by number of settlements in each period's survey. Excludes contracts of unknown duration. Concessions are first-year wage freezes and cuts.
b. First six months.

Profit sharing, which has been part of some concession agreements, adds an element of wage responsiveness to the business cycle, since profits are likely to reflect cyclical conditions. But profit sharing in the union sector does not appear to be spreading rapidly. In 1981, 10 percent of all concession contracts included profit-sharing plans. In 1984, only 3 percent did so; in the first six months of 1985, 4 percent. Measured by workers covered, rather than number of contracts, over 80 percent of the union workers covered by concession agreements with new profit-sharing plans are at General Motors and Ford; the overall number of workers covered is probably in the 500,000 to 600,000 range.

One reason that profit sharing is not more widespread is that concession bargainers often adopt employee stock ownership plans (ESOPs) instead, primarily because ESOPs are the beneficiary of a variety of

strong tax incentives. Thus, from 1983 to 1984, the number of workers, both union and nonunion, covered by ESOPs rose by 19 percent, and the number of ESOPs rose by over 6 percent.[24] Except for the very rare case of 100 percent employee ownership, however, ESOPs do not affect labor costs; they simply spread the equity interest in the firm over a wider range of owners, some of whom happen to be employees.

Wage Sensitivity to Price Change

The best clue concerning wage sensitivity to price inflation is to be found in the treatment of COLA clauses. According to BLS data, COLAs covered about 59 percent of workers under major private contracts in late 1979 and 57 percent in late 1984. When 1979 is used as a base period, it appears that changes in industry mix account for almost all of the change; the number of workers covered by COLAs in 1984 was over 95 percent of the level that would have been predicted using 1979 industry-level COLA propensities. On a contract basis, the actual level was about 86 percent of that predicted.[25]

Management felt "burned" by COLAs in the late 1970s, because of unanticipated inflation and certain aberrations in the CPI. However, the standard reaction in the 1980s was not to abandon the COLA principle, with the notable exception of a recent Teamsters intercity trucking settlement. Indeed, given the reduction in price inflation, which historically has been associated with elimination of COLA clauses, collective bargainers appear to have stuck to their COLAs with surprising tenacity.

Major contract data suggest, however, that the "quality" of COLAs has deteriorated. During 1980–82, COLAs provided 60–70 percent protection against inflation; that is, a 1 percent increase in prices triggered a 0.6–0.7 percent wage increase. In 1983–84, the ratio was estimated at a little over 50 percent.[26]

The concession contract data support these findings. Table 8 provides a breakdown of "COLA contracts," concession contracts that either preserved or eliminated a COLA. About 28 percent of the contracts fell into this category, despite the large proportion of settlements in construction, where COLAs are rare. Of the COLA contracts, only 7 percent

involved a COLA elimination. Eight percent retained reference to the COLA principle but suspended the operation of the COLA clause for the life of the agreement. Fifty-one percent retained an active COLA clause but limited its operation in some way. The remainder provided for open-ended COLA operation with no limitations.

Table 8. Trends in COLA Clauses in Concession Contracts, January 1981--June 1985[a]

Sector	*COLA contracts as percentage of all concession contracts*	*Suspended COLA contracts as percentage of COLA contracts*	*COLA elimination contracts as percentage of COLA contracts*	*Limited COLA contracts as percentage of COLA contracts*
Construction	7	0	0	45
Other	42	9	8	51
Total	28	8	7	51

Source: Same as Table 4.

a. COLA contracts are contracts with active or suspended COLA clauses plus contracts eliminating COLA clauses. Concessions are first-year wage freezes and cuts.

COLAs can be limited in a number of ways: by diverting COLA money to fringe benefits; placing a cap on payouts regardless of the inflation rate; freezing operation of the COLA below a minimum rate of inflation; eliminating certain payments; reducing the frequency of payments, for example, from quarterly to annual; and delaying payments. With the exception of the last two devices, the COLA limitations will produce lower wage costs over the course of a contract. In fact, most of the COLA limitations imposed do reduce the wage adjustment over the life of the contract.[27]

Both the heavy use of COLA limitations in the concession agreements and the BLS data on the lessened degree of real wage protection provided by recent COLA clauses suggest a reduction in the c coefficient in the wage-change equation. As with the other concession features, there is no sure way of predicting the staying power of the innovations. However, the fact that the COLA principle was retained is significant. It is one thing to realign the real or relative wage level through COLA manipulations, another to pretend indefinitely that price inflation does not erode purchasing power. COLA clauses in themselves have typically provided less than 100 percent protection against inflation; yet contracts

containing COLAs, including their guaranteed wage increases, have historically provided roughly full protection.[28] Still, in the near term, COLA restrictions will mean that union wages will be less sensitive to price inflation than they were in the 1970s.

IMPLICATIONS FOR AGGREGATE WAGE CHANGE

Despite its notable shrinkage, the union sector still has a disproportionate weight in aggregate wage indexes, especially average hourly earnings. Union workers earn significant premiums compared with nonunion workers and also work longer hours per week. Thus, their weight in total payrolls exceeds their weight in total employment. Union wages have a weight of roughly one-third, for example, in the Employment Cost Index. Wayne Vroman estimates that union wages accounted for 48 percent of production worker pay as of 1980, thus giving them substantial weight in the average hourly earnings series. Their weight in average hourly earnings in manufacturing may be on the order of three-fourths.[29] As a result, union-sector wage developments remain important to aggregate wage changes.

Nonunion wages do not mechanically follow union wages; if they did, the union-nonunion wage differential could not have widened as it did in the 1970s. The reversal of the widening trend after 1982 also suggests that the slowing of union wage growth is not being fully reflected in wages of nonunion employees. Of course, many nonunion employees do not work in close proximity to union workers and so might be relatively insulated from wage spillover effects. As a partial test of direct union-to-nonunion spillover in the early 1980s, I used BLS area wage surveys to select metropolitan areas where unionization of production workers was at least 70 percent in manufacturing, but where unionization of clerical workers in the same establishments was below 10 percent. Ten areas met these criteria. Table 9 compares the wage movements of heavily unionized production workers with those of the lightly unionized clerical workers. As can be seen, wages of clerical workers in the selected areas rose more slowly than those of blue-collar workers in the late 1970s, then more quickly from 1982 to 1984. Thus, the data for

nonunion clerical workers in close proximity to unionized production workers exhibit the same tendencies found in general comparisons of nonunion and union wages. Nonunion workers were less affected by the downward norm shift of the 1980s than were union workers.

Table 9. Wage Trends in Selected Metropolitan Areas, 1975–84[a] (Percent Change per Year)

Category of employee	*1975–79*	*1979–82*	*1982–84*
Unskilled plant worker	8.6	10.2	5.4
Skilled plant worker	8.6	9.4	5.3
Office clerical worker	7.7	9.9	5.9

Source: U.S. Bureau of Labor Statistics, *Area Wage Surveys* for selected areas.
a. See text for selection criteria for areas. Figures are simple averages of annualized wage rate changes for ten areas.

Of course, some spillovers to the nonunion sector did occur; it is easy to cite particular cases in which executive and nonunion white-collar pay was limited as a quid pro quo or as an inducement for union wage concessions.[30] However, even if such union-to-nonunion spillovers are limited in importance, the union sector is still large enough for a downward shift in its wage norms to affect aggregate wage indexes. If the peak of concessionary settlements has now passed, there could be some "firming" of reported pay adjustments as the proportion of freezes and cuts diminishes. But even those settlements containing positive wage adjustments have been notably moderate in recent years. There is nothing in the labor market that would suggest a reversal of this moderation.

NOTES

1. Daniel J. B. Mitchell, *Unions, Wages, and Inflation* (Brookings, 1980).

2. Daniel J. B. Mitchell, "Recent Union Contract Concessions," *BPEA* 1 (1982): 165–201.

3. An upper-limit estimate of the proportion of workers in the major union sector who experienced a wage freeze or cut since 1979 can be made by assuming (incorrectly), first, that no worker experienced more than one concession and, second, that the number of workers experiencing concessions in each year reflected the number of workers in that unit as of 1984 as reported in *Current Wage Developments*. The first assumption leads to an overstatement of the number of workers involved, because some workers did experience more than one concession. The second assumption tends to overstate the

number of union workers experiencing concessions, since union membership generally fell in the private sector during the period of concession making. (Note that the word "concession" is used interchangeably with "first-year wage freeze or cut" throughout this paper.) A lower-limit estimate can be made by taking only the two highest consecutive years of concession making since 1979, since a worker was unlikely to be covered by two concessions in a two-year period, and by using the larger 1983 base to compute the fraction. The upper-limit estimate using the methodology described above is 49 percent, and the lower limit is 33 percent.

4. The regressions run to obtain predicted data for Table 2 were of the form of equation 1 in the text, where p is the annual percentage change in the deflator for personal consumption expenditures from the national income accounts lagged one year, and U^{-1} is the current year inverse of an unemployment rate. For the union sector, a union-oriented unemployment rate was estimated by taking sectoral unemployment rates and weighting them by the proportion of union-represented workers in those sectors in 1984. Sectors used were agriculture, mining, durables, nondurables, transportation and public utilities, wholesale and retail trade, finance, insurance and real estate, and services. (Since the data in Table 2 refer to the private sector, the government sector was not included in the union-oriented index.) Data on union representation in these sectors appear in Paul O. Flaim, "New Data on Union Members and Their Earnings," *Employment and Earnings* 32 (January 1985): 13–14, 208–211. Unemployment rates by sector appear in U.S. Bureau of Labor Statistics, *Handbook of Labor Statistics*, bulletin 2175 (Washington, D.C.: GPO, 1983), 75; and in *Employment and Earnings*, various issues. The regressions were run on an annual basis over the period 1959–79. The earnings and compensation indexes refer to year-over-year changes; the union wage variables refer to changes within years. Regression results are available from the author. Similar results through mid-1983 are reported in George L. Perry, "What Have We Learned about Disinflation?" *BPEA* 2 (1983): 592–594. It might be noted that if the regressions in Table 2 are estimated using CPI-W for all equations and the official unemployment rate for the union wage indexes, similar results are obtained.

5. A crude estimate of the proportion of contracts in existence in each sector shown on Table 4 can be made from BNA published data by simply summing the number of new settlements reported by sector over the three-year period 1982–84. If all contracts were exactly three years in duration, this technique would be completely accurate. But since the average duration is somewhat less than three years, the technique will give excess weight to sectors with a propensity for short contracts. A sector with a higher proportion of concessions than of contracts is concession-prone. Some difficulties arise with this calculation method because the BNA uses more aggregate industry classifications than Table 4 for certain sectors. Nevertheless, using approximations where necessary, all sectors listed in Table 4 except lumber and paper and printing and publishing appear to be concession-prone. In particular, construction, which had 39 percent of the concessions reported on Table 4 is estimated to account for only 18 percent of the contracts. Construction does have a propensity for short contracts so even the 18 percent figure is an overestimate. In the

lumber and paper case, most of the major firms have reported concessions in some units, and it is likely that the sector would appear concession-prone if the calculation could be made based on the percentage of workers rather than contracts.

6. Proposals for changing Davis-Bacon were originally made by the Reagan administration in 1982, but were not fully in force until early 1985. Some features were implemented in mid-1983. See "Labor Department Issues Final Rules for Setting Davis-Bacon Wage Rates," *Daily Labor Report*, February 1, 1985, pp. A3–A4.

7. George L. Perry, "Inflation in Theory and Practice," *BPEA* 1(1980): 207–241. See also Perry, "What Have We Learned about Disinflation?" 587–602.

8. "Gravediggers Expand Strike," *Los Angeles Times*, March 30, 1985, section 1, p. 31. Ultimately, the strikers did receive a pay increase in this dispute.

9. See U.S. Bureau of Labor Statistics, *Earnings and Other Characteristics of Organized Workers*, May 1980, bulletin 2105 (GPO, 1981), table 9; Flaim, "New Data on Union Members." Note that the figures from these sources refer to representation, not membership. Since some nonmembers are represented by unions, representation rates are higher than membership rates. Metropolitan area data are from U.S. Bureau of Labor Statistics, *Area Wage Surveys: Selected Metropolitan Areas*, 1979 and 1983, bulletins 2050–73 and 3020–73 (GPO, 1981 and 1984).

10. This estimate was made using data on private sector workers covered by major agreements in November 1979 and October 1984 in forty-one industry classifications. The ratio of union workers covered by major agreements in each industry to production and nonsupervisory worker employment was calculated for November 1979. This ratio was then applied to the October 1984 employment figures to estimate a predicted number of union workers. The number of union workers fell from 9.4 million in 1979 to 7.4 million in 1984, a drop of 2 million, compared with the 500,000 drop predicted by the ratio projections. Thus, only one-fourth of the drop is explained by employment changes. Data on workers under major union agreements appear in *Monthly Labor Review* 103 (January 1980): 10; and 108 (January 1985): 24.

11. I ran annual regressions over the period 1959–79 to explain the three strike indexes reported in Table 6. The independent variables were the official unemployment rate and price inflation (CPI-W) lagged one year. Predicted values for 1980–84 exceeded actual values for all years for the number of larger strikes and for all years except 1983 for the indexes of worker involvement. A telephone industry strike in 1983 pushed up worker involvement substantially; had I included a variable for number of workers negotiating, this one deviant result would probably have vanished. Regression results are available from the author.

12. This is certainly perceived to be the case by leaders of organized labor. See "'Drastic Change' in Legal Climate Drives Unions Away from NLRB Protection," *Daily Labor Report*, February 13, 1985, pp. C1–C7.

13. For example, an (upward) inflection point can be observed around 1970 in various indexes related to unfair labor practices of employers handled by the National Labor

Relations Board. See Richard B. Freeman and James L. Medoff, *What Do Unions Do?* (Basic Books, 1984), 230–233. A major study has been under way at the Massachusetts Institute of Technology concerning changes in the industrial relations system. The M.I.T. researchers conclude that large, nonunion firms became the leaders in industrial relations innovations "somewhere in the 1960s" as their motivation to remain nonunion increased. See Thomas A. Kochan, Robert B. McKersie, and Harry C. Katz, "U.S. Industrial Relations in Transition: A Summary Report," in Barbara D. Dennis, ed., *Proceedings of the Thirty-seventh Annual Meeting*, December 28–30, 1984, Industrial Relations Research Association (Madison: IRRA, 1985), 261–276.

14. "Report of the AFL-CIO Committee on the Evolution of Work on the Changing Situation of Workers and Their Unions," *Daily Labor Report*, February 25, 1985, pp. D1–D22.

15. Audrey Freedman, *The New Look in Wage Policy and Employee Relations*, Report 865 (New York: Conference Board, 1985), chapters 2 and 3. See also *Employer Attitudes toward Compensation Change and Corporate Values* (William M. Mercer, Inc., September 1983), 13, which reports that two-thirds of the managers surveyed believe that across-the-board pay increases will be less important than they have been in the past.

16. For example, Armour Food Co., a well-established firm with a long history of unionization, was recently reported to have closed facilities and replaced 2,000 union workers with nonunion personnel upon reopening. See Henry Weinstein, "Armour Food Draws Fire as NLRB Probes Charges of Hiring Bias," *Los Angeles Times*, February 19, 1985, section 4, pp. 1, 8.

17. Mitchell, "Recent Union Contract Concessions," 189–192. See also Robert J. Flanagan, "Wage Concessions and Long-Term Union Wage Flexibility," *BPEA* 1 (1984): 183–216.

18. The BLS currently is in a dispute with the aerospace industry over the treatment of bonuses in calculating average hourly earnings. The BLS wishes to exclude the bonuses, while the industry, which has sales contracts indexed to average hourly earnings in SIC 3721, wants to include them. As a result, earnings data for that industry are currently not being published.

19. For example, the Packard Electric Division of General Motors Corporation established a ten-year two-tier plan in late 1984. Under the plan, new hires start at 55 percent of the existing worker wage. See "GM Workers at Packard Site Approve New Labor Accord," *Wall Street Journal*, December 17, 1984, p. 18.

20. The BNA provided the author with a printout of the cases surveyed. The survey was reported in "Two-Tier Wage Contracts Advancing in Popularity," *Daily Labor Report*, July 11, 1984, pp. B4–B6.

21. Note that the BNA survey was based on number of contracts, while the Jacoby-Mitchell survey was based on the firm as a unit of observation. Firms were asked if any of their wage contracts had two-tier arrangements. See Sanford M. Jacoby and Daniel J. B.

Mitchell, "Management Attitudes toward Two-Tier Pay Plans: An Analysis," *Journal of Labor Research*, forthcoming.

22. "Two-Tier Wage Systems Found More Commonly in Nonmanufacturing Sector," *Daily Labor Report*, February 20, 1985, pp. BI–B4.

23. Arnold R. Weber and Daniel J. B. Mitchell, *The Pay Board's Progress: Wage Controls in Phase II* (Brookings, 1978), 363–367.

24. See "Employee Ownership Plans Jumped to 6,800 in 1984," *Daily Labor Report*, April 3, 1985, p. A5. Although union-nonunion breakdowns of the plans are not available, there is evidence of growing union interest in ESOPs. See "Acceptance of Employee Stock Ownership Plans Growing within Ranks of Organized Labor," *Daily Labor Report*, August 26, 1985, pp. C1--C4.

25. Using the same data source on private sector workers under major contracts cited in note 10, I calculated the ratio of workers with COLAs to the total number of workers under major agreements in each industry as of November 1979. Actual and predicted numbers of workers with COLAs were then calculated for October 1984. The same tabulation was made for number of agreements.

26. These estimates were reported in *Current Wage Developments*, various issues.

27. I went back to the original contract listings for the COLA settlements and examined their reported details. The statement in the text is based on this examination.

28. See Mitchell, *Unions, Wages, and Inflation*, 137–149.

29. Estimates for the employment cost index were provided to the author by the BLS. On production worker wages, see Wayne Vroman, "Cost-of-Living Escalators and Price-Wage Linkages in the U.S. Economy, 1968–1980," *Industrial and Labor Relations Review* 38 (January 1985): 227. The estimate for hourly earnings in manufacturing is based on the blue-collar component of the employment cost index, since union weights are not calculated for hourly earnings.

30. For example, International Harvester announced management pay cuts just before requesting union wage concessions in early 1982. See William C. Rempel, "Harvester Asks UAW for Relief," *Los Angeles Times*, February 19, 1982, section IV, p. 2.

CHAPTER 3

THE SHARE ECONOMY AND INDUSTRIAL RELATIONS

Martin Weitzman's recent proposal (in *The Share Economy* [1984] and other works [1983, 1985]) that the widespread use of profit sharing could resolve the unemployment/inflation dilemma differs markedly from the traditional view of sharing arrangements. Rather than seeing profit sharing as a means of increasing worker involvement in the performance of the enterprise (Metzger and Colletti 1971), Weitzman argues that its chief benefits are macroeconomic (and thus may not benefit the individual firm at all); moreover, he maintains that these advantages will flow only if worker involvement is minimized.

Weitzman's objectives are to lower the long-term unemployment rate and to stabilize employment in the face of recession. He argues that profit sharing would produce a permanent labor "shortage," forcing firms to act as employment "vacuum cleaners," sucking up all unemployed workers as they became available. Thus, full employment would be engendered by extensive use of profit sharing. Since the labor shortage would tend to persist, even in the face of moderate recessions, firms would be unlikely to lay off workers during business declines.

Weitzman's insistence on worker noninvolvement in management decisions is based on his microeconomic analysis of profit sharing. His conclusion makes him wary of the role unions and collective bargaining might have in a share economy. As the following discussion will demonstrate, however, profit sharing is not incompatible with collective bargaining. Indeed, there are circumstances under which profit sharing might be better suited to a union than to a nonunion environment. The Weitzman proposal, if implemented, could provide unions with the new

This essay originally appeared in *Industrial Relations* 26, no. 1 (1987): 1–17. © 1987 by The Regents of the University of California. All rights reserved. Used by permission of the publisher.

role they have been seeking in the face of declining membership and concession bargaining.

OVERVIEW OF THE WEITZMAN PROPOSAL

To understand the reservations Weitzman has expressed about the compatibility of collective bargaining and profit sharing, it is first necessary to understand the basic features of his proposal. The idea that profit sharing could have macroeconomic benefits is not new; it was discussed in the U.S. in the thirties and forties (Slichter 1939; King 1941) and its relevance for the Australian economy was noted even earlier (see Sutcliffe 1925). Dormant for many years, the idea was revived in the early eighties (Mitchell 1982; Thurow 1984; Canada, Department of Finance 1984; Wallich 1984). Weitzman's microeconomic justification for the macro benefits has no precedent, however.

The Employment Vacuum Cleaner

Weitzman views labor compensation as potentially coming from two sources: an hourly wage (W) and a share. For convenience, only the profit-sharing version is developed here. Assume that the share of profits (P) going to workers is divided among them equally on the basis of hours worked (H). Effective hourly compensation (C) can be expressed:

$$(1)\quad C + W + (sP/H)$$

where s is the fraction of profits being shared.

In a traditional wage system, $s = 0$ and $C = W$. In a "pure" share system, $W = 0$ and $C = sP/H$. In a completely worker-owned firm, $s = 1$ and $C = P/H$. Finally, in the partial share systems which characterize firms that already use profit sharing, $0 < s < 1$ and $C > W > 0$, assuming positive profits.

Microeconomic theory argues that firm behavior in the short run is unaffected by a proportionate profits tax. In Weitzman's share economy, the workers' share of profits is treated by the firm as a profits tax, i.e., it is ignored in decisions on output and employment. But if a firm offers profit sharing, it will also offer a lower wage (W) than if it had no share

system, since the expected profit-sharing bonus is a (partial) substitute for wage compensation. Thus, when the firm shifts to profit sharing, the lower wage will prompt it to hire more workers than before.

If many firms shift to profit sharing, however, their extra hiring demands will tend to exhaust labor supplies, producing a permanent labor shortage. Firms will then stand ready to offer jobs to any available unemployed workers. They will relax hiring standards and offer training and transportation, as has occurred in wartime and other periods of excess demand for labor (Okun 1973). To induce firms to switch to profit sharing and to maintain profit sharing as a significant element of pay even in the face of a labor shortage, Weitzman advocates strong tax incentives.

Figure 1 illustrates the Weitzman proposal, starting from a less than full employment situation. Line *dd* is the labor demand curve of a firm which initially has no profit sharing and offers only an hourly wage W as its total compensation C. Hence, $C = W$. Then, because of tax incentives, the firm is induced to offer a profit-sharing plan. At first, it lowers its wage to W' and makes up the rest as a share bonus equal to line segment $W'C$.[1] But at the new wage W', the firm would like to expand its employment level from the initial level I to the desired level D. If many firms have made similar switches to profit sharing, however, the ID extra workers may not be available. Collectively, the extra labor demands of many firms tend to push the economy to full employment and beyond. Thus, given its specific wage and share offer, the firm might find that only IA extra workers could be hired. Effective hourly compensation falls when the firm expands employment, as the additional workers "dilute" the profit-based bonus pool. If the full employment level of compensation in the marketplace is C', the firm will find itself at point "a" in Figure 1. Its actual employment level will be A. Although the firm has a shortage of labor (AD), it will not find it profitable to raise its wage or share offer.

To understand this paradox, consider the possibility of expanding employment to level A' by raising wages or the share sufficiently to meet the market compensation level C'. The firm would have to expend

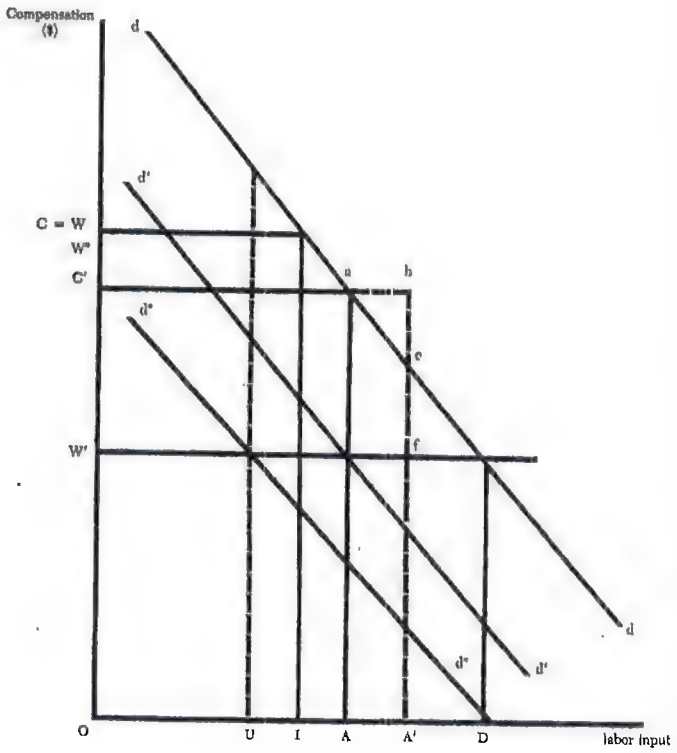


Figure 1.

AabA´ on additional compensation, but would add revenues equal only to area *AaeA´*. Profits would thus be reduced by triangle *abe*.[2] Given a sufficient tax incentive, the firm stands ready to hire anyone who might become available, but it does not raise pay above C´. This is the essence of Weitzman's employment vacuum cleaner. Every willing worker is hired, but wage inflation does not result.

Employment Stability

Figure 1 also illustrates the employment stabilizing effect which Weitzman imputes to profit sharing. When the firm is operating at point "*a*," it has a labor shortage of *AD*. Even if business declined to the level corresponding to a labor demand curve as low as *d´d´*, the firm would not lay off any workers. The drop in demand to *d´d´* would merely

alleviate the labor shortage; any higher demand curve would still leave some of the shortage unrelieved. Only if business conditions deteriorated further, say to the level consistent with lower demand curve $d''d''$, would layoffs occur. In the case of $d''d''$, for example, the firm would layoff *UI* workers.

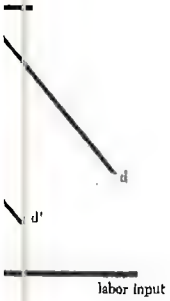
It is clear from Figure 1 that the employment stabilizing effect depends on two factors: the degree of the demand decline and the level of the preexisting labor shortage. The latter depends importantly on the elasticity of labor demand. When the initial demand curve is relatively inelastic, the labor shortage *AD* caused by the switch to profit sharing is small.[3] Inelastic demand thus shrinks the buffer which profit sharing offers against layoffs.

THE FEASIBILITY OF PROFIT SHARING

Weitzman's plan has received its friendliest reception in the news media. Two *New York Times* editorials (1985a, b) have suggested that Weitzman is the Keynes of the eighties. This comparison is ironic since Keynes insisted that the solution to the problem in the labor market (unemployment) did not lie in fixing the wage system, whereas Weitzman insists that reforming the wage system is essential.

One of the attractive elements of the Weitzman proposal is that profit sharing is a known technique. Profit-sharing plans have been used in the U.S. since the nineteenth century (Cooper 1934), Moreover, there already are tax incentives favoring some types of profit sharing. The difficulty faced by Weitzman and proponents of the share economy is one of explanation and differentiation. Not all share plans have the economic effects Weitzman and others seek. But personnel managers and members of Congress—who think of profit sharing mainly as a possible productivity, morale, or loyalty booster—may have trouble understanding these differences in macroeconomic consequences.

The tax inducements Congress offered to Employee Stock Ownership Plans (ESOPs) beginning in the mid-seventies are a case in point. Personnel managers and Congressional representatives tend



dd revenues equal only
triangle *abe*.[2] Given a
ite anyone who might
C'. This is the essence
very willing worker is

bilizing effect which
m is operating at point
s declined to the level
$d'd'$, the firm would
o $d'd'$ would merely

to see ESOPs and profit sharing as variations on a theme of employee motivation and involvement. But ESOPs, as they currently exist, do not produce Weitzman's macroeconomic benefits; they merely spread stock to new owners. ESOPs could be modified to produce Weitzman-type effects, mainly by holding the shares for the benefit of employees only while they are employed by the firm.[4] Those who retire or quit could not take their shares with them. Persuading Congress to revise the tax code to foster only these kinds of ESOPs would pose problems, however.

Thus, the past history of share arrangements both helps and hinders a move to a genuine share economy: Given the historical precedent for profit sharing, a proposal for more sharing arrangements does not seem particularly radical. On the other hand, the fact that profit sharing "competes" with other share systems for the interest of personnel managers and politicians is a possible barrier to its widespread adoption.

CRITICISMS OF THE WEITZMAN PROPOSAL

Most economists who have responded to Weitzman's argument have focused on matters of theory rather than on problems of actual implementation. Three issues particularly relevant to collective bargaining have been raised. First, if workers dislike variable incomes, can their unions be induced to accept profit sharing with its potentially variable bonus? Second, would unions accept bonuses based on firm profits, since such bonuses would inevitably conflict with the principle of (interfirm) equal pay for equal work? Third, wouldn't workers have an incentive under profit sharing to resist new hires (who dilute the available bonus pool)? Wouldn't unions push the firm to reduce its labor input, thus thwarting the vacuum cleaner effect?

These concerns, of course, apply as well to nonunion firms and their workers. But without a union, dissatisfied workers are more limited in the resistance they can offer to management initiatives. Hence, the objections can be seen as oriented to the collective bargaining sector.

ions on a theme of employee
Ps, as they currently exist,
omic benefits; they merely
uld be modified to produce
the shares for the benefit of
the firm.[4] Those who retire
em. Persuading Congress to
nds of ESOPs would pose

ents both helps and hinders
en the historical precedent
ring arrangements does not
the fact that profit sharing
terest of personnel managers
despread adoption.

MAN PROPOSAL

Weitzman's argument have
problems of actual imple-
to collective bargaining have
incomes, can their unions
potentially variable bonus?
on firm profits, since such
nciple of (interfirm) equal
rs have an incentive under
the available bonus pool)?
labor input, thus thwarting

nonunion firms and their
orkers are more limited in
itiatives. Hence, the objec-
bargaining sector.

VARIABLE INCOMES AND COLLECTIVE BARGAINING

A simple answer to the question of variable incomes is that the tax incentive must be sufficient to "bribe" the parties to incorporate profit sharing. It is easy to point to the many artificial incentives in the tax code which induce alterations in behavior in the field of employee compensation (and elsewhere in economic life). Indeed, the growth of fringe benefits as a percentage of worker compensation since the forties is in large part due to the tax incentives provided.

There are deeper issues hidden in the question of worker preferences, however. With the advent of implicit contract theory (see Rosen [1985] for a review), economists have assumed that because existing labor market arrangements tilt toward wage rigidity with layoffs, there must be an efficiency motivation for such a system. Thus, undoing the system via the Weitzman plan is seen by some as potentially inefficient. But there are reasons to doubt this view.

Preferences for Wage Rigidity

Cross-cultural comparisons raise questions about the efficiency interpretation of wage rigidity. There is evidence that the Japanese bonus system functions as a profit-sharing arrangement, with the bonus reflecting firm profitability. Bonuses account for about 20 percent of the compensation of Japanese manufacturing production workers (U.S. Bureau of Labor Statistics 1985). Weitzman and others have attributed Japan's lower and more stable unemployment rate to the bonus system (Gordon 1982; Hashimoto 1979).

In accepting the bonus system, do Japanese workers demonstrate less of a "taste" for income security than do American workers? Or is it possible that, once created, institutions such as the Japanese bonus system simply become part of the norm of compensation practices? Workers come to expect a set of pay practices. Firms who deviate and don't provide those practices appear peculiar and are disadvantaged in the labor market.

Furthermore, can it really be said that current American wage-setting institutions provide income stability? To have stability, three elements must be controlled. The weekly wage bill of a firm is the product of

(1) the wage times (2) the average weekly hours per employee times (3) the number of employees. Typically, demand fluctuations are met initially by changes in weekly hours (overtime may be added or reduced) and then by changes in the number of employees (through recalls, new hires, and layoffs). Only in unusual circumstances, e.g., the union wage concessions of the early eighties, is the wage element made part of the adjustment mechanism.

The claim that unions are bargaining efficiently for some optimal level of income stability is difficult to support analytically. How can they achieve their goals while bargaining for only one of these three key variables, namely the wage? In most union contracts, decisions on hours and employment are left largely in the hands of the employer. Moreover, there is evidence that the wage-only system resulted from historical, social, and political developments in the thirties which had little to do with efficiency (Mitchell 1985a).

In the post-World War II environment, it is widely accepted that labor-cost adjustments should be made through layoffs and that compensation arrangements should be inflexible. Workers expect this policy; firms offer it. Tax incentives would undoubtedly be needed to push the compensation system toward more gain sharing. But in time, worker expectations and behavior could change. As an example, should there be more income instability under a share system, worker savings behavior might adjust. But if Weitzman is correct about the macroeconomic effects, a share economy would offer *more* employment stability and steadier real incomes than the existing wage system.

Accommodating Senior Workers

There is substantial evidence that the preferences of senior workers have more weight in union decision making and negotiating outcomes than those of junior workers (Freeman and Medoff 1984). Senior workers tend to be more insulated from layoffs than others; thus, a conventional wage system provides them with steady incomes. Their wages do not fluctuate with the economic conditions of the employer. And their employment is unlikely to be interrupted unless the firm encounters

severe economic adversity. The most senior workers would not be attracted to Weitzman's share economy—even if it did smooth out the business cycle—since they might experience more income variability under a share economy than under the current wage system. Given senior workers' influence on union decision making, the "bribe" (through the tax code) required to convert unions to a share system could be very large. Ways around this potential problem might emerge from collective bargaining, however. The development of systems of layoff by reverse order of seniority under the existing wage economy shows that bargainers can respond to the preferences of seniors.

For Weitzman's desirable economic effects to operate, the marginal cost of hiring must be less than the average cost. Thus, creative arrangements must be formulated which shield inframarginal senior workers from income fluctuations and shift the burden to marginal employees (new hires and juniors). As an example, a system could be developed in which workers who acquire some specified level of seniority could shift from a wage-plus-bonus system of pay to a pure wage system. Alternatively, a more gradual schedule might provide that as seniority is acquired, the wage rises relative to the expected bonus.

Obviously, such pay arrangements could create personnel problems. In a particularly profitable year, for example, juniors might receive higher total pay than seniors, owing to large bonuses. But all arrangements which favor seniors present personnel problems at times (e.g., layoff by reverse order of seniority causes difficulties related to "bumping" rights, definitions of seniority districts, etc.). Thus, while senior workers' preferences pose problems for adoption of a share system, they should not be assumed to be insurmountable barriers.

THE PRINCIPLE OF EQUAL PAY FOR EQUAL WORK

Equal pay for equal work is often cited as a union goal. Unions frequently seek a "common rule" for wages and want to "take wages out of competition." Under a share economy, however, even if unions equalized wages, share bonuses would still vary across firms, depending on each firm's

economic performance. Would the desire of unions to equalize pay block adoption of a share economy?

Two motivations might be cited for pay equalization as a union goal under the current wage system. One is equity. It seems unfair for workers doing the same job to receive unequal compensation. Another factor is product market competition. If firms are allowed to pay unequal wages, then the firm with lower pay scales—other things equal—has an advantage in the marketplace and may eventually drive higher wage competitors out of business.

These objectives of pay equity and fair product market competition are not necessarily compatible. For example, the same pay and benefit schedule may produce widely different real value for workers, depending on demographics, local living costs, company overtime practices, etc. On the other hand, attempting to equalize the value of pay to individual employees could thwart the goal of equalizing labor costs across competing enterprises.

For this reason, and because employer bargaining strength between firms varies, union goals of equalizing pay are often interpreted flexibly. It is easy to cite examples in which pay is made to seem equal across firms, but because of differences in fringe benefits, escalator formulas, and the like, the actual results are quite disparate. There are always artful ways of hiding inequalities or of defining the concept of equality.

A union in a share economy, for example, could claim to have equalized compensation if it obtained the same pay *formula* from two companies. Obviously, the result in take-home pay would differ if one firm were more profitable than the other. But this is no different than the differential outcomes that result under a standard wage system if one firm provides more overtime than another, or if workers at one firm—for reasons of age or number of dependents—obtain more value from a given fringe benefit than workers at some other firm.

Thus, it is difficult to determine in the abstract whether the union objective of equal pay for equal work—however defined—would be a block to adoption of Weitzman's share plan in the union sector. However, the flexibility with which "equality" has been handled in the past in the

union sector suggests that unions could incorporate share elements of compensation into their bargaining agendas, particularly if tax incentives are provided. Profit sharing has already been adopted in some prominent bargaining situations, notably in the automobile industry.

EMPLOYMENT LIMITATIONS AND BARGAINING

Upon converting to a profit-sharing system, the employer has an incentive to expand employment. New hires contribute to firm profits, but additions to the workforce tend to dilute the bonus pool. (Their marginal contribution to the pool is less than the average bonus.) Indeed, the dilution effect is an integral reflection of the Weitzman employment-expansion mechanism.

Nonunion employees might understand that new hires were depriving them of potential income, but they would be hard pressed to do anything about it. Union workers, on the other hand, would have a mechanism to prevent dilution; they could press for contractual limits on the number of new hires. Hypothetically, they might even demand that the firm reduce its existing employment level as normal attrition occurred.

It is not only the dilution effect which could lead unions to push for employment limits. Imagine that a union comes to represent a group of previously nonunion workers who have been receiving a bonus based on 20 percent of profits. Assume that tax incentives encourage the union to take any compensation increase it can obtain in the form of a bonus. Finally, suppose that the union is successful in obtaining an increase in the bonus pool to 25 percent of profits. If the firm was initially in a labor shortage situation, the added bonus now gives it a competitive edge in the labor market. It can hire more workers because its total compensation per worker exceeds the market average. But as the firm expands employment, it dilutes the bonus to the point where total compensation is again at the market rate. The union might find that it had achieved no compensation increase per worker, despite its seeming bargaining gain![5]

The only certain way the union can push up the level of compensation per employee in this situation is to raise the share coefficient (or the

hourly wage) and also limit the firm's ability to hire. For example, if the share coefficient were raised from 20 to 25 percent and no increase in employment was permitted, the average bonus would rise by one-fourth. At least in theory, then, collective bargaining in a system with a significant profit-sharing element seems to require bargaining over employment limits. Weitzman's assertion that "the bargaining power of labor unions is not a natural right" (1984, p. 109) reflects his concern that if unions were to impose hiring limitations on firms, they might plug up the employment vacuum cleaner (Nuti 1986; Matthews 1985). Yet he acknowledges that union workers—especially the senior workers who are least prone to layoff—might have qualms about his share system.

Weitzman's reservations about union behavior in a share economy are reasonable. In addition to union workers' likely demands for limits on hiring, the literature on worker-owned firms (Ward 1958; Vanek 1970) suggests that firms in a share economy might voluntarily restrict employment. Worker-owned firms are a special case of profit sharing, with the share coefficient set at 100 percent. Hence, problems associated with these earlier models have been raised in connection with the Weitzman proposal. The models suggest that, other things being equal, worker-owned enterprises would show reluctance to hire. Instead of setting wages equal to the marginal revenue product of labor (the profit maximizing and efficiency condition), they would attempt to cut back on hiring to raise average profits per worker.

There is no way of knowing in advance how unions actually would behave in a share economy, but there are reasons to believe that the employment limitation effect would not prevent a share system from having beneficial macroeconomic consequences. These reasons are discussed below.

Employer Resistance

Models of union behavior often overlook the fact that unions are not free to determine the compensation of their members unilaterally. In a share economy, employers would resist demands for greater shares of profits or higher wages, just as employers currently resist union demands

in a wage economy. Similarly, union demands for employment limits certainly would meet with resistance. There are instances in which unions have been able to hold compensation well above market levels for extended periods, so there is no a priori reason to assume that employer resistance under a share economy would completely offset union pressure for employment restrictions. But even where employer resistance was weak, there would still be product market limits to union power. If unionized employers were forced to pay "excessive" rates of compensation compared with nonunion competitors, they eventually could be put out of business—to the detriment of the union.

Clearly, then, models which assume that unions can determine employment conditions unilaterally will yield misleading predictions. In particular, conclusions drawn from models based on worker-owned firms—where effectively there is no "employer" other than the workers themselves—are problematic when applied to enterprises in a share economy. It is in worker-owned firms alone that there will be no employer resistance to union demands for employment limitations or pay increases.

Employment Limitations with Labor Shortages

The union's behavior and its economic consequences depend critically on the magnitude of the tax incentive for share compensation. Consider a situation in which the tax incentive is sufficiently strong to induce the union to accept a wage rate below the going market rate of expected compensation. The union takes the rest of labor compensation in the form of a profit-sharing bonus. Under these circumstances, the union might provide enhanced employment stability if it succeeds in imposing an employment limitation. Figure 1 illustrates this point.

Assume first that the firm shown in Figure 1 is nonunion. It pays a wage W' and has a profit-sharing bonus formula which brings expected hourly compensation up to level C', the market rate. The firm would like to hire D units of labor but can only hire A (since further hiring would push compensation below C'). Thus, the nonunion firm has a shortage of AD units of labor.

If there were a downward demand shock in excess of $d'd'$, the firm would begin to reduce its labor utilization. Now assume instead that the firm has been unionized and that the union has restricted employment to level U, in order to raise the share per worker. The firm could now withstand a downward demand shock of up to $d''d''$ before shedding labor. Thus, collective bargaining could further the Weitzman objective of smoothing out cyclical employment fluctuations, although at the cost of plugging up the employment vacuum cleaner (in the union sector).

Nonshortage Situations

If the tax incentive for share compensation systems is relatively weak, a union might obtain an hourly wage rate which was above the market rate for expected compensation, such as W'' in Figure 1. To W'', the union might add provision for a profit-sharing bonus. Even in such a case, there is a potential for beneficial employment stabilizing effects.

A wage such as W'' would mean that the firm had no labor shortage. The vacuum cleaner is shut off by the high wage. Indeed, the firm would bring about the employment limitation (as under a conventional wage system) by rationing access to jobs. Nevertheless, the firm would have a somewhat higher level of employment, since some compensation is taken as a profit-sharing bonus, than it would if the union took all worker compensation in the form of a wage.

Even in this nonshortage case, however, profit sharing might have an employment stabilizing effect. Suppose that the union were interested in job security as a bargaining objective; in principle, it could demand that the employer guarantee both a wage and an employment level (i.e., a fixed-dollar commitment). In the real world, there are few cases in which unions have achieved such ironclad income protection. More typically, employers resist such demands because turning labor into a fixed cost could endanger firm survival in the face of a downward shift in demand. The compromise for unions is generally some form of work-rule restriction which may lower productivity, but still permits employment to fluctuate with output. Alternatively, a system may be established which

protects an "in" group (usually those with high seniority) at the expense of other (junior) workers.

A profit-sharing system could make it easier for an employer to provide an employment guarantee in a nonshortage situation. With profit sharing, an employment guarantee would not make labor a fixed cost. If demand turned down, profits would decline. But some of the impact would be absorbed by declining profit-sharing bonuses for workers. This motivation appeared to be a factor in the coincident negotiation of profit sharing and job/income guarantees in the automobile industry in 1982 and subsequently. Thus, profit sharing opens up a greater range of bargaining possibilities for employment stabilization than exists under a wage system, even in the nonshortage case.

Nonunion Employment Limitations

At least some of the complications which collective bargaining adds to the Weitzman model could be present in nonunion firms as well. Recent research has demonstrated that large, nonunion enterprises often develop union-like personnel practices (Foulkes 1980). In addition, theoreticians have argued that firm wage policy partially reflects a need to maintain employee discipline. Firms in these models attempt to pay a wage premium so that workers will have something to lose in the event of a disciplinary discharge. The result of many firms following this policy is unemployment (Shapiro and Stiglitz 1984).

In a Weitzman share economy, nonunion firms might impose employment restraints on themselves in an attempt to buttress their compensation levels (wage plus bonus) and create a climate of employee loyalty or a discharge penalty for worker malfeasance. Indeed, given the labor shortage tendencies of the Weitzman system, the need for a discipline "premium" would be enhanced. Such behavior on the part of many nonunion firms would mean that the unemployment rate under a share economy would be somewhat higher than otherwise, although undoubtedly it would be lower than what real-world wage systems typically have produced.

Even if unions were to limit Weitzman's vacuum cleaner effect, this would not immediately cripple the share economy. Unions represent a minority of the workforce. In the eighties, the union representation rate in the private sector fell below one-fifth. Thus, even if unions restricted employment in their sector, total employment (union plus nonunion) could still expand under widespread profit sharing. Second, unions have employment restricting effects under conventional wage systems. As unions push up wages, firms themselves will restrict employment. Thus, the employment limitation issue comes down to a relative question: Would employment in the union sector be more restricted under profit sharing as compared with a conventional wage system?

Finally, unions have institutional objectives which include increased membership. Under a wage system, as Arthur Ross (1948) pointed out, it is unclear that unions "understand" the trade-off between pay and employment. With profit sharing, the trade-off becomes explicit. Objectives of increasing or maintaining membership could place limits on how far unions would go in restricting employment in a share economy.

THE WIDER IMPLICATIONS OF SHARE BARGAINING

At the very least, a share-bargaining union would face a problem of administration and policing without substantial counterpart under a wage system. Currently, if a union bargains a wage of, say, $12 per hour for a group of workers, it is easy to verify whether or not the employer is living up to the agreement. Workers will quickly know if they are being shortchanged. Under profit sharing, however, shortchanging might not be obvious. Profits are notoriously subject to accounting manipulation. Thus, a union with profit sharing must have both access to the employer's books and the ability to interpret what is in them.

A New Union Role in Management

It is only a step from access to information to critiquing what that information reveals. If company profits were to drop, it is likely that the union would want to know the reason for the decline, not merely that it had occurred. At the company level, profitability will respond to more than

the economy-wide business cycle; it will also reflect managerial decisions. A share system inevitably opens up questions of shared decision making as well as shared financial outcomes.

Share systems would tend to break down the unions' long-standing role as passive demanders. After World War II, the American management community successfully channeled union energies into improvements in wages and benefits and away from a decision-making role. The model of management acting and union reacting became the norm. But share-bargaining unions would be under strong pressure to revise that role and to take part in making the decisions which would affect the size of the share.

There is good reason to doubt that contemporary unions are well suited, in their present organizational form, to play the enlarged role that a share economy ultimately would bring. The American model of unionization has always been one of a weak center (the AFL-CIO) with autonomous constituent unions. In some of the constituent unions, in turn, the center is weak and local or regional bargaining is the norm. But the need for expertise, which is inherent in share bargaining, would call this decentralized structure into question. Expertise carries with it a large fixed cost in professional staffing. Economies of scale would suggest union mergers and centralization to meet this cost.

Even that treasured American institution—the multiyear union contract—would not be sacrosanct under share bargaining. Managerial decisions are continuous; they do not occur in three-year cycles. If multi-year contracts were used to specify wages and profit-sharing formulas, there would also need to be continuous union-management consultations. Such consultations would weaken the principle that revisions in the union-management relationship should occur only at regular, specified intervals.

Obviously, the pressures which share bargaining could create raise many questions. For both labor and management, share bargaining carries with it potential costs as well as gains. What is clear empirically is that the "mature" collective bargaining of the existing wage system, with its limited role for unions, has been associated with declining collective bargaining coverage. A share system would automatically encompass a new and larger role for unions. There is no guarantee that an enlarged union role would also lead

to an enlargement of the fraction of the workforce unionized, but there are reasons to expect that it could have that effect.

The Increased Appeal of Unions

A share system puts nonunion employees at a disadvantage. They would share with unionized employees the problem of new hires diluting the bonus pool, but, in addition, nonunion employees would lack a voice in the management decisions which affect their shares. They would not have channels for implementing even the elementary task of verifying the size of the share. This lack could ultimately provide unions with an organizing issue: Unions could argue that they would be able to intervene with management to audit and influence the workers' share. Of course, management might react by trying to create a nonunion alternative to an outside union. Apart from the legal complications entailed, however, it would be difficult for management to create a captive auditor/critic and still give that entity integrity.

The industrial relations implications of the share economy proposal suggest that the concerns of Weitzman and others that unions might prove a barrier to a shift to share arrangements may be misplaced. Management could prove to be a more formidable source of resistance, if share plans were fostered by public policy. The resulting pressures for employee participation in managerial decisions, even if contained within a nonunion setting, might seem threatening to traditional managers.

PROSPECTS FOR A SHARE ECONOMY

Weitzman's share economy has implications which go far beyond macroeconomic stability and lowered unemployment, important as those objectives are. A share economy might eventually require labor market institutions very different from those which presently exist. Nevertheless, the Weitzman proposal seems capable of attracting a broad coalition. Profit sharing has a latent appeal across the political spectrum. The left could interpret it as backdoor socialism (worker ownership); liberals could see it as a new route to industrial democracy; and the right could view it as a way of fostering among workers an appreciation for the

operations of a free enterprise economy. This potential of gathering a broad range of support is perhaps the strongest parallel between the attraction of Weitzman's proposal in the eighties and the embrace of Keynesian ideas and policies after World War II.

NOTES

1. It seems reasonable to start from a point at which the firm pays the same (expected) compensation after conversion to a share system as it paid under the previous wage system. Figure 1, as described in the text, shows effective compensation dropping from C to C′. However, it is important to note that a switch to a share economy would have such substantial macroeconomic effects, according to Weitzman, that it cannot be predicted whether labor compensation would fall in the long run. If, for example, switching to a share economy smoothed out the business cycle, the rate of investment might be higher, ultimately raising real wages.

2. Weitzman's description of the labor market as in a state of "shortage" is the cause of some confusion. In a conventional shortage situation, there are incentives to raise prices (wages). Hence, the market is in disequilibrium. But under Weitzman's shortage, there is no such disequilibrium. The situation portrayed in Figure 1 is more analogous to the "shortage" of customers felt by a monopolist in equilibrium. The monopolist would be happy to sell an additional unit at the quoted price but has no incentive to lower the price to attract an extra unit of sales.

3. No precise calculations of real-world labor demand elasticities exist. The elasticity of labor demand is the product of three other elasticities: (1) the elasticity of the product price with respect to the wage; (2) the elasticity of the volume of output demanded with respect to the price; and (3) the elasticity of labor demanded with respect to output. The first is related to the share of labor in total costs, a ratio which typically falls in the 10–40 percent range. Thus, elasticity #1 will probably be below 0.4. Production workers are typically about 80 percent of all employees. Thus, the third elasticity might be reasonably approximated by 0.8. A unitary elasticity of product demand would therefore imply that a "typical" labor demand elasticity is something below 3.2 percent.

4. Consider a firm which shares 20 percent of profits with workers under a profit-sharing system. If the firm instead created a trust fund for workers which held 20 percent of the firm's stock, the trust arrangement would be identical to the profit-sharing plan, as long as workers who terminated their employment with the firm lost their rights to benefits from the trust. (Some qualification about retained earnings, and how workers would value them, might be made.) In a typical ESOP, however, workers can take their shares with them (or have their shares repurchased by the trust). Giving workers shares through a conventional ESOP is similar to a one-time benefit and would not promote lower wage rates. Hence, Weitzman's macroeconomic benefits are not present under such ESOPs.

5. In Figure 1, compensation level C′ is determined by the labor market. The firm cannot hire at an effective level below C′. If the union obtains a higher profit-sharing bonus,

it makes the firm supercompetitive in the labor market. Given the labor shortage, the firm will take advantage of its competitive edge to hire more workers until effective compensation falls back to C'. A firm with demand curve dd might end up raising employment from A to A', paying wage W', and an expected profit-sharing bonus of bf. As noted earlier, this is not a position the firm would have chosen on profit-maximizing grounds, absent union pressure. Whether the position is sustainable in the long run depends on the firm's profitability prior to unionization. If it enjoyed pre-union "rents," the position might be sustainable. However, as noted in the text, the union would probably want to take (some) of the rents in higher incomes rather than only in more employment.

REFERENCES

Canada, Department of Finance. *Gain Sharing for a Stronger Economy*. Ottawa: 1984.

Cooper, Lyle W. "Profit Sharing." In R. A. Seligman and Alvin Johnson, eds., *Encyclopaedia of the Social Sciences*. New York: MacMillan, 1934, pp. 487–492.

Foulkes, Fred K. *Personnel Policies in Large Nonunion Companies*. Englewood Cliffs, NJ: Prentice Hall, 1980.

Freeman, Richard B., and James L. Medoff. *What Do Unions Do?* New York: Basic Books, 1984.

Gordon, Robert J. "Why U.S. Wage and Employment Behavior Differs from that in Britain and Japan." *Economic Journal* 92 (March 1982): 13–44.

Hashimoto, Masanori. "Bonus Payments, On-the-Job Training and Lifetime Employment in Japan." *Journal of Political Economy*, 77, part 1 (October 1979): 1086–1104.

King, Willford I. *The Causes of Economic Fluctuations: Possibilities of Anticipation and Control*. New York: Ronald Press, 1941.

Matthews, R. C. O. "Review of Weitzman's *Share Economy*." *Journal of Economic Literature* 23 (June 1985): 658–660.

Metzger, Bert L., and Jerome A. Colletti. *Does Profit Sharing Pay?* Evanston, IL: Profit Sharing Research Foundation, 1971.

Mitchell, Daniel J. B. "Gain-Sharing: An Anti-Inflation Reform." *Challenge* 25 (July–August 1982): 18–25.

———. "Inflation, Unemployment and the Wagner Act: A Critical Reappraisal." *Stanford Law Review* 38 (April 1986): 1065–1095.

New York Times. "Best Idea Since Keynes" (editorial), March 28, 1985a, section I, p. 30.

———. "How to Cut Unemployment, Without Magic" (editorial), April 25, 1985b, section I, p. 20.

Nuti, D. M. "The Share Economy: Plausibility and Viability of Weitzman's Model." Paper presented at the Arne Ryde Symposium, Lund University, August 26–27, 1985. Forthcoming in the proceedings of the symposium (1986).

Okun, Arthur M. "Upward Mobility in a High-Pressure Economy." *Brookings Papers on Economic Activity* 1 (1973): 207–252.

Rosen, Sherwin. "Implicit Contracts: A Survey." *Journal of Economic Literature* 23 (September 1985): 1144–1175.

Ross, Arthur M. *Trade Union Wage Policy*. Berkeley, CA: University of California Press, 1948.

Shapiro, Carl, and Joseph E. Stiglitz. "Equilibrium Unemployment as a Worker Discipline Device." *American Economic Review* 74 (June 1984): 433–444.

Slichter, Sumner H. "The Changing Character of American Industrial Relations." *American Economic Review*, supplement, 29 (March 1939): 127–137.

Sutcliffe, J. T. "Wages and Production." *Economic Record* 1 (November 1925): 63–72.

Thurow, Lester. "Revitalizing American Industry: Managing in a Competitive World Economy." *California Management Review* 27 (Fall 1984): 9–41.

U.S. Bureau of Labor Statistics. *Handbook of Labor Statistics*. Bulletin 2217, Washington, DC: GPO, 1985.

Vanek, J. *The General Theory of Labor-Managed Market Economies*. Ithaca, NY: Cornell University Press, 1970.

Wallich, Henry C. "Why Bonuses Make Sense for Unions." *New York Times*, January 22, 1984, section 3, p. 3.

Ward, Benjamin. "The Firm in Illyria: Market Syndicalism." *American Economic Review* 48 (September 1958): 556–589.

Weitzman, Martin L. "Some Macroeconomic Implications of Alternative Compensation Systems." *Economic Journal* 93 (December 1983): 763–783.

———. *The Share Economy: Conquering Stagflation*. Cambridge, MA: Harvard University Press, 1984.

———. "The Simple Macroeconomics of Profit Sharing." *American Economic Review* 75 (December 1985): 937–953.